**Supplemental material**

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| **Table S1.** Missing values for biomarker measurement on ICU admission. | | |
|  | **Severe**  **fluid overload**  (N=5) | **No severe**  **fluid overload**  (N=95) |
| Urinary midkine, n | 0 | 1 |
| Urinary IL-6, n | 0 | 1 |
| Urinary NGAL, n | 0 | 0 |
| Urinary hepcidin-25, n | 0 | 0 |
| Urinary NGAL/hepcidin-25 ratio, n | 0 | 0 |
| Serum creatinine, n | 0 | 0 |
| Serum urea, n | 0 | 2 |
| Plasma BNP, n | 0 | 2 |
| Plasma CKMB, n | 0 | 0 |
| Plasma lactate, n | 0 | 0 |
| Plasma C-reactive protein, n | 0 | 3 |
| Plasma leukocytes, n | 0 | 0 |
| Plasma IL-6, n | 2 | 8 |
| Plasma NGAL, n | 0 | 2 |
| Plasma hepcidin-25, n | 0 | 1 |
| Plasma NGAL/hepcidin-25, n | 0 | 3 |
| Plasma haptoglobin, n | 0 | 3 |

\*of anesthesia. \*\*postoperatively

|  |  |  |  |
| --- | --- | --- | --- |
| **Table S2.** Fluid balance (from induction of anesthesia). | | | |
|  | **Severe**  **fluid overload** | **No severe**  **fluid overload** | **p-value** |
| First 6 hours, mL | 1,200 (330-3,100) | 1,100 (490-1,980) | 0.607 |
| Second 6 hours, mL | 1,800 (1,500-4,300) | 1,100 (650-1,800) | 0.021 |
| Third 6 hours, mL | 1,000 (600-2,600) | 300 (-200-700) | 0.018 |
| Fourth 6 hours, mL | 2,200 (900-3,700) | 700 (100-1,200) | 0.009 |
| 24 to 48 hours, mL | 4,500 (900-14,500) | -300 (-1,000-500) | 0.004 |

**Figure S1. Flow diagram showing patient flow through the study.**

